TCXO5300

High Performance Lower Cost 5mm x 3mm TCXO

Features

9.6 to 40 MHz (2.8 and 3.0V supply)
9.6 to 25 MHz (with 5V supply)
5.0 mm x 3.2 mm x 1.2mm ceramic SMD
Compact and lightweight
Clipped sine output

Picture of Part

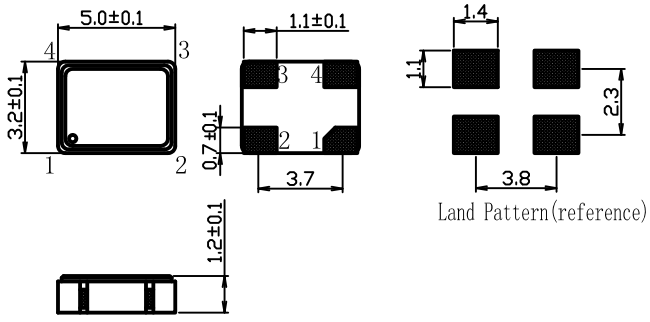
Typical Applications

Wireless / Satellite Communications
WLAN / WiMAX / WIFI
SONET / SDH / ATM

Description

The TCXO5300 family offers a wide operating frequency range for a wide variety of applications. This cost effective family is manufactured with a number of standard frequencies:
10, 12.8, 13, 14.4, 15.36, 16.384, 19.2, 19.44, 19.68, 20, 25, and 27 MHz.

Physical Dimensions & Pin Connections



Pad Connections:
Pad 1:Voltage control for VCTCXO;Ground for TCXO.
Pad 2:Ground; Pad 3:Output Pad 4:Supply Voltage

Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f_0		9.6	10	40	MHz	26 to 40MHz (2.8V and 3.0V)
				9.6		25	MHz	for 5V supply option
HCMOS	Load				15		pF	
	Output - level		Logic High	0.9Vcc			Volts	
			Logic Low			0.1Vcc	Volts	
	Rise/Fall					10	ns	20% to 80%
	Duty Cycle			40	50	60	%	Standard
Clipped Sine	Output			0.8			Volts	Peak to paek
	Load		10K//10pF		10K 10pF			
Power supply								
Voltage		Vcc		3.150	3.300	3.450	V	3.0V, 2.8V and 5V available
Current consumption		Icc			4.0		mA	At 10 MHz, 3.3V
Frequency control*								
Control voltage range Input Impedance		Vc		0.5 50	1.5	2.5	V Kohm	Positive tuning slope
Tuning range				+/- 5.0			ppm	
Tuning Linearity Modulation BW				20		10	% KHz	BW measured at -3 dB
Frequency stability								
vs. temperature			-40°C to +85°C, ref 25°C	-1.0		+1.0	ppm	**Best Stability available
vs. 5% change in supply voltage			ref Vcc typ.	-0.300		+0.300	ppm	
Tolerance at 25C				-2.0		+2.0	ppm	Frequency 24 hrs after reflow
SSB Phase noise **@ 10 MHz Typical** **HCMOS Output**			10 Hz		-96		dBc/Hz	
			100 Hz		-122			
			1 kHz		-138			
			10 kHz		-145			
			100 kHz		-150			
Aging	Per Year		Projected yearly aging after 30 days operation	-1.0		+1.0	ppm	
Environmental, mechanical conditions.								
Operating temperature range			**-40°C to +85°C maximum range available that is standard**					
Storage temperature range			**-40°C to 85°C**					

Ordering Information

TCXO5300-XX.XXXXXX-W-Y-Z-Output

1. Field " XX.XXXXXX " is the Output Frequency to six decimals in MHz
2. Field " W " is Operating Temperature Range and Freq. Stability :
    a. " 0 " for -20°C to +70°C and +/- 1.000 ppm
    b. " 1 " for -30°C to +75°C and +/- 1.000 ppm
    c. " 2 " for -30°C to +85°C and +/- 1.000 ppm
    d. " 3 " for -40°C to +85°C and +/- 1.000 ppm
    e. " 4 " for -40°C to +85°C and +/- 1.500 ppm
    f. " 5 " for -40°C to +85°C and +/- 2.000 ppm
    g. " 6 " for -40°C to +85°C and +/- 2.500 ppm
    h. " 7 " for -40°C to +85°C and +/- 3.000 ppm
    i. " 8 " for -40°C to +85°C and +/- 5.000 ppm
    j. ** NOT all frequencies available with option 3 and 4
    k. Please consult factory
3. Field " Y " is Power Supply Option
    a. " 0 " for 3.0 V +/- 5%
    b. " 1 " for 2.8 V +/- 5%
    c. " 2 " for 5.0 V +/- 5%
    d. " 3 " for 3.3 V +/- 5%
4. Field " Z " is TCXO (clock) or VCTCXO (voltage control)
    a. " 0 " for TCXO
    b. " 1 " for VCTCXO
5. Field " Output " is output wave
    a. " 0 " for CMOS
    b. " 1 " for Clipped sine

Part Number Example

TCXO5300-10.000000-3-0-1

10.000000 MHz Operating Frequency

Operating Temperature of -40°C to +85°C

+/- 1.000 ppm Frequency Stability

3.0 V +/- 5% supply

VCTCXO option (voltage-controlled frequency adjust)